conditions were relatively stable with moderate increase in temperature, but during the last decade there was a change to decidedly unsettled weather and general rains.

The most important depressions, all crossing the extreme southern region, were mapped on the 21st to 23d, 25th to 26th, and 28th to 30th.

Anticyclones, advancing from southern Chile toward Argentina, were mapped in the following periods: 1st to 5th, 11th to 13th, and 14th to 21st. In the period 6th to 9th an antarctic HIGH crossed the continent in a northerly direction.—*Translated by W. W. R.*

Climatological summary for Chile, September, 1930; by J. Bustos Navarrete, Observatorio del Salto, Santiago, Chile.—Like September this month was characterized by settled atmospheric conditions. Cyclonic storms of importance appeared in the extreme south during the periods 21st to 22d and 29th to 30th. During the remainder of the month anticyclonic areas dominated conditions and the weather was fine. The important HIGHS, all of which moved from southern Chile toward Argentina, were charted in the periods 2d to 12th, 13th to 17th, and 22d to 26th.—*Translated by W. W. R.*

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C FITZHUGH TALMAN, in charge of Library

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SOLAR OBSERVATIONS

SOLAR AND SKY RADIATION MEASUREMENTS DURING OCTOBER, 1930

By HERBERT H. KIMBALL

For reference to descriptions of instruments and exposures, and an account of the method of obtaining and reducing the measurements, the reader is referred to this volume of the REVIEW, page 26.

Table 1 shows that solar radiation intensities averaged close to the normal intensity for October at Washington, D. C., and Lincoln, Nebr., and slightly below normal at Madison, Wis.

Table 2 shows an excess in the total solar radiation received on a horizontal surface directly from the sun and diffusely from the sky at Washington, New York, Fresno, and La Jolla, and a slight deficiency at Chicago, Madison, and Lincoln. The excess was marked at Washington.

Skylight polarization measurements obtained at Washington on six days during the month give a mean of 52 per cent and a maximum of 55 per cent on the 4th. At Madison, measurements obtained on four days give a mean of 54 per cent and a maximum of 61 per cent on the 10th. The values for both stations are considerably below the corresponding October averages for the respective stations.

TABLE 1.—*Solar radiation intensities during October, 1930*

[Gram-calories per minute per square centimeter of normal surface]

Washington, D. C.

Date	Sun's zenith distance									
	8 a.m.	78.7°	75.7°	70.7°	60.0°	0.0°	60.0°	70.7°	75.7°	78.7°	Noon
	75th mer. time	Air mass									Local mean solar time
		A. M.					P. M.				
	e.	5.0	4.0	3.0	2.0	[1]1.0	2.0	3.0	4.0	5.0	e.
	mm.	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*mm.*
Oct. 1	6.27	0.77	0.87	1.07	1.16						5.36
Oct. 2	5.79	0.70	0.90	1.08	1.24	1.48	1.23	1.03	0.92	0.80	4.95
Oct. 3	6.27				1.09						6.27
Oct. 4	6.76				1.06		1.18	1.05	0.90	0.75	4.95
Oct. 6	6.02	0.85	0.96	1.08	1.24	1.56					5.79
Oct. 7	6.79	0.67	0.78	0.81	1.03	1.27					5.79
Oct. 11	10.21	0.50	0.63	0.77	0.90						9.83
Oct. 17	11.81			0.71							10.21
Oct. 18	5.36	0.78	0.93	1.08							3.45
Oct. 20	2.16	0.76	0.96	1.08	1.33		1.22				1.96
Oct. 22	3.45	0.66	0.78	0.91	1.08	1.34					3.45
Oct. 23	4.95			0.91							3.39
Oct. 24	6.50	0.67		1.06	1.21						4.37
Oct. 28	7.57			1.03							6.76
Oct. 30	5.16	0.62	0.71	0.91	1.05						4.75
Oct. 31	4.17	0.49	0.64								3.81
Means		0.68	0.81	0.96	1.13	1.41	1.21	(1.04)	(0.91)	(0.78)	
Departures		−0.07	−0.02	+0.01	+0.01	±0.00	+0.09	+0.11	+0.11	+0.07	